ONCE MORE ABOUT THE PONTO-CASPIC FACTOR IN THE FORMATION OF THE NOUA CULTURE[1]

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The Noua culture was formed in the context of profound demographic, economic and cultural transformations, that put the stress on the transition from the Middle Bronze Age (MBA) to the Late Bronze Age (LBA), on the territory, that comprises almost entirely Transylvania, Moldavia, the Northern half of Bessarabia and the Ukrainian Pricarpat'e. In the previous period this territory constituted the area of more archaeological units: Wietenberg, Monteoru, Costişa - Ciomortan, Komarow and the western variant of the Mnogovalikovaja pottery culture (MPC). As to the Costişa - Ciomortan culture, it seems not to survive until the beginning of the Noua culture - thus it is not certainly known what culture directly preceded the beginning of the Noua culture in the northern half of Moldavia. It is quite possible that in that period this area was occupied by the Komarow culture (closely related with Costişa - Ciomortan culture) and MPC, both cultures probably being *"hidden"* in the tumuli, which so far have not been much investigated in that area.

Although there are some regional differences (especially in the *"Noua I"* phase) inside the Noua culture, compared with the cultural diversity of its area in the MBA, it however appears as a homogeneous formation. In its *"Noua I"* phase, the Noua culture offers a series of elements that prove the contribution of the MBA carpatho-danubian cultures to its formation[2].

At the same time, looked at as a whole, the Noua culture, especially in its classic phase, differs to a great extent from all carpatho-danubian MBA cultures. In the first place it is to be mentioned the impressive growth of the number of settlements, a large spreading of the *zol'niki* and the abundance of animal bones in the settlements. As far as stock breading is concerned, it should be pointed out that the animal races modified the proportion between the animal species changed[3] and new species (*camel*[4]) appeared. To some extent the Noua culture differs from the MBA carpatho-danubian cultures also by several anthropological characteristics[5]. The pottery of the Noua culture is characterised by a wide spread of sack-shaped vases, often decorated with bands, as well as by semifine and rarely fine cups with handles having often cylindrical, conical or mushroom-shaped terminations, decorated much more rarely, compared with the MBA carpatho-danubian cultures. At the same time, in the field of metallurgy, with the appearance of the Noua culture, remarkable technological achievements were accomplished: the spread on a large scale of *tin-bronze* pieces, the extensive use in of the two- and *multy-piece casting moulds* etc.; consequently the degree of *standardisation* of the bronze objects grew, new types of objects *appeared* (*socketed axes, sickles, spearheads* etc.)[6]. The abundance of *bone manufactured* pieces characterises the Noua culture as well: notched *shoulder blades,* various types of *arrowheads, "sickles" - "tupik"* and others, which were unknown till then in the Carpatho-Danubian Basin. Among the new elements should also be mentioned the *votive plastic art of burned clay: antropo-* and *zoomorphic statuettes,* various small *"eggs"* and *"globes"* as well as small *"loaves of bread"* and other. As for the funeral rites and rituals there should be mentioned some elements that distinguish the Noua culture from the MBA cultures of the Carpatho-Danubian space. The cremation is more rarely used; although flat cemeteries are often found, also graves in *tumuli* are relatively frequent (Caşolţ[7] in Transylvania, Burlăneşti[8], Chirileni[9], Pererîta[10], Dumeni[11] in Bessarabia); graves in *cists* (Burlăneşti[12], Moreşti[13], Jigodin[14]). In the eastern area (Staryc Bedraži = Bădrajii Vechi) a great part of the graves are scattered with *ochre*[15]. The funeral inventory of the Noua culture, compared to that of the MBA carpatho-danubian cultures is many poorer (but more rich compared with that of the MPC), while the funeral rituals are more uniform. Such elements of the funeral rites as *cists, ochre* and the use of *tumuli* seem to be caused by the eastern influences. As to the rites and rituals, looked

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upon as whole, the funeral monuments of the Noua culture occupy an intermediate position between MPC and the Monteoru culture[16].

The elements, by which the Noua culture is distinguished from the carpatho-danubian MBA cultures, create the impression that to a great extent it represents a *trend foreign to local traditions.* At the same time, it is exactly by these traits, the Noua culture presents a lot of close analogies with the Sabatinovka culture in the North-Pontic area and the Coslogeni culture in the Lower Danube region, a fact that caused many specialists to use the term *"Sabatinovka-Coslogeni-Noua cultural complex"*[17]. Recently, in the area of the Noua culture was included also the territory east to the Dniestr[18], a zone which traditionally was considered as belonging to the Sabatinovka culture[19].

Starting up from all these circumstances the majority of specialists consider that the Noua culture was formed to a great extent thanks to the influences from East[20]. Recently it was presented as belonging to *"eastern population, related to those of the Northern Caucasus and the North-Pontic Steppes"*[21]. As for the real zone and the ethnic-cultural medium from which these influences could have come, as well as its unfolding aspects and the character of this phenomenon, the opinions differ. It was initially believed that these influences came from the *Sruby culture* from the *Volga-Don* area[22], while others considered later that they came from the *North-West-Pontic Sabatinovka culture*[23]. Some specialists consider that these influences had the form of *cultural impulses*[24]. Other authors maintain that there had been a *mass migration of the population*[25] while others suggest the *penetration of small groups of eastern groups, which might have disturbed ethnic-cultural and territorial structures and determined the cultural and demographic transformations in the Carpatho-Danubian area*[26]. To any extent the point of view, according to which the similitude between some cultural elements from Ponto-Caspic area, Southeast and Central Europe were determined by the *dynastic relationships* is close to this idea. In the last years some authors have seen these influences in connection with the *Sintašta - Arkaim* cultural phenomenon[27].

In the last years I have tried to draw specialists' attention to the fact that the interpretation of the process of formation of the Noua culture as a direct consequence of the evolution and western expansion of the Sruby cultural complex does not agree with the actual picture of the MBA and LBA East-European ethnic-cultural context and is not chronologically proved[28]. My reasons were the following: first, one of the main premises of the hypothesis about the *Sruby culture western expansion factor* was the idea that the Sabatinovka culture had directly derived from the Sruby one (after O.A. Krivcova-Grakova[29]). It has been rejected by the majority of specialists in last 30 years[30]. As to the possibility of the Sabatinovka culture extension from the North-Pontic area into the Carpatho-Danubian space, I consider that at least in the present stage of research there is no proof, that this culture had been formed before the Noua culture[31]. In my opinion at that time, the Sabatinovka culture derived directly from the *MPC,* which had an important contribution, together with the Monteoru and Costişa-Komarow cultures, also to the formation of the Noua culture. I considered that the MPC contributed to the formation of the Noua culture not only directly, but also through the previous influences on the East-Carpathian cultures[32]. An outstanding role in this process was that of the climatic changes in the South of Eastern Europe in that period[33], which favoured the sedentary nature of the north-pontic populations. Remarkable progress in bronze metallurgy contributed to the intensification of the relations between the Carpatho-Danubian Basin and the North-Pontic area. In their turn these required cultural adaptation to new conditions and facilitated cultural changes.

Now, in the light of new discoveries, recent literature as well as thanks to the change of opinions with other specialists (V. S. Bočkarev, E. N. Černych and V. V. Otroščenko), I have to specify my position.

I continue to consider the bearers of the Noua culture as descendants of the populations of the MBA carpatho-danubian cultures. But regarding the eastern influences there is necessary more wide approach.

Although the Sabatinovka culture has a series of elements that can be perceived as being inherited from the MPC - mainly, those concerning the funeral rites and rituals and, to a lesser extent, some pottery forms - looked upon as a whole - just like the Noua culture compared with the Carpatho-Danubian cultures - it really represents a unit which to a great extent seems to be foreign compared to the MBA north-pontic cultural patterns. The Sabatinovka culture is clearly distinguished from the MPC by the following traits:

- By its more or less sedentary character - well over thousand Sabatinovka culture settlements are known[34], while the number of the MPC settlements is tiny;

- By the practising of agriculture on a large scale[35];
- By the wide spreading of *"zol'niki"*. Note that they are concentrated mainly in the western part of its area[36];
- By the great number of bronze hoards and foundries[37];
- By a whole series of new categories and types of *tin*-bronze objects (*celts-axes, reaps, daggers*)[38], bone objects: *notched shoulder blades, "sickles"-"tupik"*[39], *arrow-holders, arrowheads* etc.[40]; clay objects: *zoomorphic statuettes*[41], a whole series of pottery types and forms (sack-pots and jar-pots often ornamented with bands, the mug with rised handles, sometimes with a crest or button)[42].

So *the rise of the Sabatinovka culture can hardly be explained only by the MPC heritage.*

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It is evident that there are a lot of new elements marking the beginning of the LBA in the North-Pontic and Carpatho-Danubian region, common to the Noua, Coslogeni and Sabatinovka cultures. It requires a *common factor (or factors?)* that stood at the basis of the cultural changes of the ethnic-cultural situation between the Azov Sea and the Carpathian Basin.

A part of common elements for these cultures have not any certain analogies in the MBA cultures, either in the Sabatinovka-Coslogeni-Noua area or outside it. From this category the following elements seem to be part: the *"zol'niki"*, the notched *shoulder blades* as well as the *votive plastic clay art.* At the same time the following should be specified.

As to the *"zol'niki"* it should be remembered that this term, as used in the archaeological literature, covers sometimes different things. In the present stage of research it seems possible for some *"zol'niki"* to represent the remnants of the houses, others - the remnants of some rituals, while a part of them seems to be simple clusters of rubbish. As long as this term is not clearly determined and does not mean more than deposits of soil full of ash and artefacts, placed within settlements or outside, any approach to the problem of the origin of the *"zol'niki"* can be only preliminary.

For the end of the MBA, the ash deposits, often near houses, had been attested east of South Urals within the *Petrovka* culture[43] and east of Eastern Carpathians within the *Monteoru (II a)* culture (Pufeşti[44], Sărata Monteoru[45]). At the same time *"zol'niki"* appear in the western part of the *Sruby* culture area, on the Severskij Donec (Rubcy, Usovo Ozero)[46]. It should be also pointed out that the above mentioned *"zol'niki" unlike* the *"zol'niki"* of Noua, Sabatinovka, Coslogeni, Belogrudovka and Belozerka cultures are much smaller and do not appear in-groups.

The *burnt clay plastic: zoo-* and *anthropomorphic* statuettes, as well as the numerous burned-clay *"eggs"*, small *"loaves of bread"* and *"globes"* widespread in the Sabatinovka, Coslogeni and Noua cultures, have no analogies in the East-European MBA cultures. The presence of this kind of artefact, just like those from Ghindeşti (Noua culture, Bessarabia)[47] and Novokievka (Sabatinovka culture, Ukraine, North of the Azov Sea)[48] in the western part of the Sruby culture area (Usovo Ozero[49]) can be explained by the Sabatinovka culture influences on the Sruby culture. At the same time the more or less close analogies votive objects in the Central Europe (*Piliny* culture[50]) can be mentioned.

The elements, which can be considered sure of the ***eastern origin*** are the followings: *stone "sceptres"*[51], *bone "sickle"- "tupik"*[52] and the majority of types of the bone *arrow-heads*[53] which, as far as one can say, appeared for the first time in the MBA in the territory between the South Ural and the Don. Of eastern origin must be mentioned also a series of types of bronze objects: *celt-axes, spearheads, daggers,* whose prototypes appear for the first time in Siberia, and then in the area between the Urals and the Volga[54]. Among the objects of eastern origin can also be mentioned the bronze *fishing hook* from Zoltan[55] (the Noua culture, south-east of Transylvania). It has perfect analogies in the MBA in the Sintašta culture[56] and the monuments of the Sejma-Turbino type[57]; in Western Europe such type of fishing hooks appear only in the LBA[58].

As an effect of the eastern influences can be considered the increasing of the role of *pastoralism,* some changes concerning the species of animals and, undoubtedly, the presence of the *camel* in the Sabatinovka and Noua cultures[59]. In the MBA the camel was totally unknown in Europe while in India, Central Asia and Kazakhstan it was highly widespread[60].

The investigations in the four cemeteries from the western part of the northern half of Bessarabia: Pererîta[61], Burlăneşti[62], Dumeni[63] and Chirileni[64], revealed also the fact that the people of the Noua culture, at least in this

part of its area, besides flat burials, used to bury their dead also in older tumuli. It can be a result of the tradition of their predecessors on that territory, the bearers of MPC. At Burlăneşti the western part of the cemetery belonging to the Noua culture overlapped the eastern part of the tumulus of the Jamna culture. A part of the graves were buried in stone *cists*, a type of funeral construction, rarely represented in the Noua culture. In the MBA it has analogies in the Komarow, MPC and Sruby cultures. Of a special interest is the *grave no. 22* discovered next to the tumulus, which had a unique construction within the Noua culture - a platform made of stone boulders and surrounded by a stone ring. The pottery found in this grave belongs to the MPC[65]. A similar funeral construction is attested in the MPC grave from Ostap'e (Ukrainian Pricarpat'e)[66]. In the same time this type of funeral construction may be compared, to some extent, with the stone rings in the cemetery no. 3 at Sărata Monteoru of the Monteoru culture (II b)[67]. The fact that this grave *is part of the Noua culture cemetery* seems to be very important from at least two points of view: firstly in this way it becomes clear that the *MPC is partially contemporaneous with the Noua culture* and secondly it suggests that *MPC bearers dominated "politically" the Noua population.*

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Concerning the *eastern factor in the formation of the Sabatinovka-Coslogeni-Noua cultural unit,* a clearly outstanding fact of interest represents the latest researches in the South of Russia and Kazakhstan. These contribute to a better understanding of the East-European ethnic-cultural and "political" context, in which the process of cultural changes unfolded and extended over all South of Eastern Europe and therefore throw a new light upon the problem of the eastern influences over the Carpatho-Danubian Basin.

At the present stage of research one can state that in the MBA Western Siberia and the South of Eastern Europe have been put into a system of cultural units, outstanding typical *shepherd's, warlike* and *dynamic,* all tightly bound together: the *Andronovo* cultural complex (western Siberia and Kazakhstan), the cultural complex *Abaševo* (the forest-steppe between the Urals and the Don, the cultural complex Sruby (the forest-steppe and steppe between the Urals and the Dnieper), *MPC* (the forest-steppe and steppe from the Don to the Lower Danube). A clearly outstanding role in the process of integration of these units was played by some strong *cultural impulses* which started in succession, first from the Altai Mountain zone, then from the South Urals and after that from the Ural-Volga-Don region. In the western part of the South of Eastern Europe (North-Pontic zone) the latest impulse was crossed by the eastward cultural impulses from the Carpatho-Danubian Basin and Aegean world[68].

At the beginning of the MBA, according to few ^{14}C uncalibrated data, in the XVIII - XVII century BC[69]) in the Altai zone relatively rich in copper and tin ore the *Sejma-Turbino phenomenon*[70] burst out. It is characterised by the new technology of bronze metallurgy: the processing on large scale of the alloy *Cu+Sn,* the appearance of the celts-axes, cast spearheads etc., elements that in the following epoch were going to cover huge territories of Eurasia. Those who knew how to turn to good account the tin ore deposits from the Altai Mountains, exceptional casters and warriors, and culturally dynamic, in a short time extended their influence westward, up to the Ural mountains, rich in copper and silver deposits. Objects of bronze, copper, silver and gold of the Sejma-Turbino type, although very few (approximately 500 pieces), are spread in various cultural mediums, from Mongolia up to Finland and Bessarabia (the Borodino treasure), a territory comprising approximately three million sq. km[71].

The *Sintašta* group had appeared tightly connected to the Seima-Turbino phenomenon, closely to the tin deposits in the steppes of Kazakhstan, in the South Ural zone with its copper and silver deposits, at the junction point of the three cultural complexes: Andronovo, Abaševo and Sruby. This, probably due to the fact that it dominated the zone rich in copper and silver deposits as well as one of the most important links in the network of the spreading of the tin or tin-bronze, had a very advanced level of development and pronounced warrior character. Its bearers were among the first to introduce on a large scale the *chariots* in battle tactics. Relevant in this respect are the graves with chariots and horses having at their muzzle notched bone bridle *cheek pieces*[72]. The discovery of three pieces of this kind at Petrovka I in the South Ural zone *abandoned in the manufacturing process*[73], proves that the kind of cheek-pieces was of local origin. The bearers of this group influenced the Abaševo culture in different ways and further on through it, or maybe directly by their penetrations into the South of Eastern Europe (the

Borodino treasure?), over the Sruby cultural complex and MPC, started a rapid spreading of the *battle-chariot*[74]. The cartography of this kind of *cheek piece*, (a reliable indicator of chariots), shows that they are spread between the South Urals, Middle Danube and Aegean[75] (fig. 8). It is very attractive to put these in the connection with the appearance of chariot in Near East and the Aegean, at approximately the same time, the cultural changes in the continental Greece and the Hyksos invasion of Palestine and then in Egypt, which they ruled between *1649 and 1541 BC*[76].

In the Carpathian Basin and in the East-Mediterranean area, the *battle chariot* was very well known in the MBA. Some images of the battle-chariots on the ceramic pot of the *Piliny* culture (Vel'ke Raškovce cemetery[77] in Slovacia), the golden button and the funeral stela from Mycenae[78], the sacred scarab of Tutmosis in Egypt[79] (fig. 7) are relevant in this respect. To these could be added the numerous notched bone cheek pieces, (the Carpatho-Danubian Basin and the South of Greece) and the bronze cheek pieces in Asia Minor, Palestine and Egypt[80].

Maybe in the MBA the carpathian population had manufactured the chariots, too. Thus, at Sighişoara there was discovered a plate bone piece which seems to be a notched *cheek-piece* abandoned in the manufacturing process[81] (fig. 5/2). Therefore it can not be confirmed for the moment that the eastern intruders had introduced the chariots with all their attributes into the Carpathian Basin. Probably it was the *idea* of the chariots, which was overtaken by the carpathian population as a consequence of the direct or indirect contacts with the eastern warriors.

On the same territory there are also spread numerous bone objects, rarely golden ones, the majority of them being probably part of horse-keeping equipment, decorated with *"mycenaean"* ornaments (fig.1; 2). While going westward from Ural-Don region, the density of cheek pieces diminishes and the number of the pieces with *"mycenaean"* ornaments grows. Their zone of maximum concentration is proved to be Carpathian Basin[82] (fig. 9). The fact that this ornamental motif is often present on the pottery and other categories of objects of the MBA and LBA carpatho-danubian cultures[83] (fig. 2/8) shows that, as N.Tasić has already mentioned[84], this ornament is of carpatho-danubian origin. The synchronism between the chariot cheek pieces and the *"mycenaean"* ornaments is proved by a whole series of arguments. Some of the cheek pieces are decorated with the above mentioned ornament[85] (fig. 4), but the *Borodino* treasure, besides the spearheads of the *Seima-Turbino* type, which in Eastern Europe are often found in the same context as the cheek pieces were, also contains a needle which is decorated at its rhombic head by a kind of *"mycenaean"* ornaments, perfectly similar to the ornament on the pot from the *Cârna* (Gârla Mare culture) cemetery[86] (fig. 3).

The fact which also requires the plausible explanation is the evident similitude between the ponto-caspic and carpato-danubian MBA cultures in what means the decoration motifs on the pottery (first of all spiral and meander), which seems to be a result of the carpatho-danubian influences above the ponto-caspic cultures.

The similar golden *"Ohrring (Lockenring)"* can be also mentioned[87].

Approaching the relationships between Ponto-Caspic area and South-Eastern Europe in the MBA, one has to take into account the very original archaeological evidence of the *centaur*, discovered in the Volga region, in the Potapovka tumular necropolis: it was a grave (no. 1, Tumulus no. 3) which had human body and horse head[88].

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With the extension of the eastern warriors to the west, in the North-Pontic space, due to the great distances from the Altai and Kazakhstan tin sources, access to tin became much more difficult. In this respect it seems relevant that while in the South of Siberia and in central Kazakhstan during the MBA the great majority of the bronze objects contain tin in optimal quantities, in the zone of the Urals only a quarter or one third of the objects contain this metal. The number of tin-bronze pieces in the Volga-Dnieper region is scarce, while in the Abaševo culture it is absent completely[89].

Because of the lack of tin deposits in the Eastern Europe[90], the bearers of the MBA ponto-caspic cultures turned their attention towards the west, into the Carpathian Basin with its numerous copper, golden and salt deposits, the region where, by the agency of the Otomani and Suciu de Sus cultures, tin regularly penetrated from the west (see the chemical analysis of the bronze objects from the hoards of Apa, Ighiel, Oradea, Pecica, Predeal, Sânnicolau Roman I, Şimleu Silvaniei I, Turda, Valea Chioarului, Vărşand, Borleşti, Sinaia, Maglavit, Larga, Păuliş[91]).

It might be possible that the aspirations of the eastern steppe warriors went much further - towards one of the most important knots of the cross-European network of the circulation of goods (so-called "amber road"), Spišsky Štvrtok[92]. But this zone and the access to it from east in the MBA was monopolised and controlled by the bearers of the *Otomani* culture, as they also were known for their warrior character and very advanced level. The gold, copper and salt zone from Transylvania were owned by the people of the *Wietenberg* and *Suciu de Sus* cultures, while the passes through the Oriental Carpathians as well as the richest resources of salt in the Oriental Carpathians area were controlled by the Costişa - Komarow and Monteoru communities. These circumstances made quite difficult the access of the ponto-caspic people into Middle Danube Basin.

In the context of these relations one should mention the *Borodino* treasure, the Borodino-type axe and an isolated group of outskirts grave inside the *Monteoru Ia* cemetery from Poiana[93] the tumular graves in Moldavia, Bărăgan, and Dobrudja[94], the hoard from Odăile Podari[95] etc. It is very possible that the relationships we are talking about would have been done by the agency of the MPC. On the other hand, the adaptation and adoption of the "mycenaean" decoration by the eastern population and the spreading of this decoration-type up to east of Urals[96] could have been one of the consequences of these relationships. The real purpose of the eastern pressures over the Carpatho-Danubian Basin - the ensuring of access to the trans-European routes of circulation of tin and other goods - was reached only in the LBA, starting with the appearance of the *Noua* culture in Transylvania. The real proof is that in the LBA tin-bronze spread massively in the North-Pontic space[97].

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The above review of some aspects of the relationships between the Pontic-Caspic cultures and those of the Carpatho-Danubian Basin, suggests the followings:

The interpenetrating of the East, Southeast and Central European elements in the MBA was one of the premises of the formation of the Sabatinovka-Coslogeni-Noua cultural complex. One of the fundamental motifs of these relations was the desire of some groups of the East-European population to ensure themselves of a safe and permanent access to tin, the necessary ingredient to obtain the high-quality bronzes, salt and other goods. This objective was achieved in the LBA, and here the Noua culture was playing the role of a main link between the Carpathian Basin and the South of Eastern Europe. The elements of eastern origin in the Sabatinovka-Coslogeni-Noua cultural complex came from two related cultural mediums: Sintašta culture and Sruby of the Volga-Don region, both probably through the agency of the MPC.

In the Carpatho-Danubian Basin these elements overlapped the Monteoru, Costişa-Komarow, Tei and Wietenberg cultures, which had already been partially influenced by the eastern cultural stream.

The problem of the local genetic roots of the Coslogeni culture, as long as MBA in the southeastern part of Romania and north-eastern part of Bulgaria is unknown, remains open. But it is evident that the eastern trend has to be also taken into consideration in this case.

Maybe the social peaks of eastern origin and the representatives of the cultural units derived from the Sintašta, MPC and Sruby cultures (see the grave no. 22 from Burlăneşti) formed the dominant force of the Sabatinovka-Coslogeni-Noua cultural unit.

For the time being, the ethnic aspects of the problem are as follows: the eastern cultures (Andronovo, Sintašta, Sruby and MPC), as far as it can be concluded at the actual stage of the research, belonged to the related *Indo-Iranian* groups[98]. The MBA cultures of the Carpatho-Danubian region belonged, probably, to *protothracians*. So the Sabatinovka-Noua-Coslogeni unit resulted out of the *iranian-protothracian* contacts. Taking into account the fact that in the majority of the cases eastern elements are connected with social prestige sphere[99], it is possible to suppose that these influences were exercised through "political" ways.

NOTES

1. The variants of this article were published in 1996: V. Cavruc, *Câteva considerații privind originea culturii Noua,* Angustia, 2, p. 67-78; idem, *Battle Chariots, "Mycenaean" Ornaments, Spread of Tyn Bronze and the Rise of Sabatinovka-Coslogeni-Noua Cultural Unit,* in The 7th International Congress of Thracology, Reports and summaries, May 20-26, Constanța-Mangalia-Tulcea, 1996, p. 247-248. It was presented also within the seminar *"The South-East of Transylvania in the context of the ethno-cultural processes of the Middle and Late Bronze Age",* April 2nd, 1995, Sf.Gheorghe and at the 7th International Congress of Thracology, May, 1996, Constanța-Mangalia-Tulcea.

2. A. C. Florescu, *Contribuții la cunoașterea culturii Noua,* ArhMold, p.164 - 170, fig. 15, 16, 17; idem, *Repertoriul culturii Noua-Coslogeni din România,* CCDJ, p.182, fig. 10/2,3,6,8,11; p. 187, fig. 15/2,3,4,5; p. 117/10,14; p. 190, fig. 18/2,3; p. 191, fig. 19/9,10; p. 195, fig. 23/27; p. 201, fig. 29/3,4,6,8,11; p. 203, fig. 31/32,24,26,28; p. 204. fig. 302/34; p. 207, fig. 35/1; p. 206, fig. 36/1,3; p. 218, fig. 40/1,3,5; p. 214, fig. 7, 10, 14, 16; p. 217, fig. 45/1-5; p. 222, fig. 50/4; p. 223, fig. 51/2; p. 224, fig. 52/10-13; p.225, fig. 53/17; p. 228, fig. 56/8-10,14-6; p. 229, fig. 57/9,17; p. 232, fig. 60/1, 5; p. 233, fig. 61/12,13,16; pag. 236, fig. 64/1-4,6-11; p. 237/12,13,15,7-23; p. 238, fig. 66/28,32,27; p. 239, fig. 67; p. 240, fig. 68-71; p. 241, fig. 69/49,57; p. 245, fig. 73/1-5,8,9; p. 249, fig. 77/2,3; p. 250, fig. 78/1; Marilena Florescu, A. C. Florescu, *Unele observații la geneza culturii Noua în zonele de curbură ale Carpaților Răsăriteni,* ArhMold, XIII, 1990, p. 51-52, 58, 60, 63-66; p. 99, fig.17/2-5,8; p. 91, fig. 19; p. 95/8-11.

3. S. Haimovici, *Caracteristicile socio-economice ale purtătorilor culturii Noua, reieșite din studiul materialului arheozoologic,* SympThrac, Satu-Mare - Carei, 1990, p.127.

4. O. G. Levitskii, E. N. Sava, *Nouvelles recherches des établissements de la culture Noua dans la zone comprise entre le Prout et le Nistru,* CCDJ, X, 1993, p.130, Tab.1.

5. M. S. Velikanova, *Paleoantropologija Prutsko-Dnestrovskogo meždurečja,* Moskva, 1975;T. S. Konduktorova, *Antropologičeskij tip ljudej kultury Noua s territorii Ukrainy,* in Voprosy antropologii, vyp. 60, Moskva, 1980, p.116-123.

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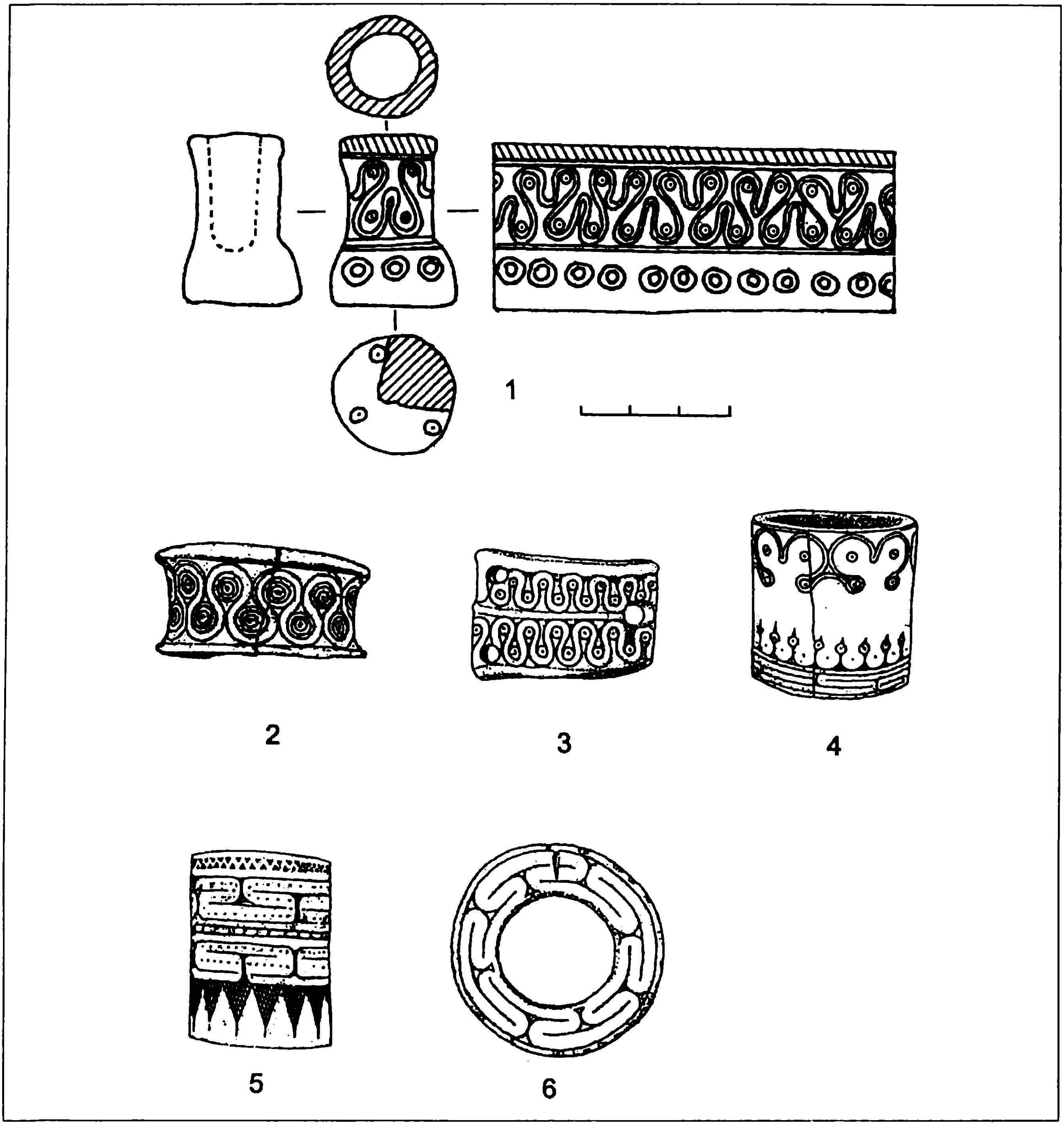


Fig.1 - Bone pieces with "mycenaean" decoration, MBA. 1: *Petrjaievo.* Russia, South Urals (Near Čeljabinsk), Srubnaja culture. Apud M.F. Obydenov, Gyul'nara T. Obydenova, 1992, p. 130, fig. 42/9; 2. *Füzesabony,* Hungary. Apud W. David, 1997, Taf. 4/4; 3. *Hoste.* Apud W. David, 1997, Taf. 4/2; 4. *Vatina.* Apud W.David, 1997, Taf. 6/1; 5. *Tiszafüred,* Hungary. Apud W. David, 1997, Taf. 6/2; 6. *Il'ičevka,* East Ukraine (Near Doneck), Sruby culture. Apud W. David, 1997, Taf. 7/4.

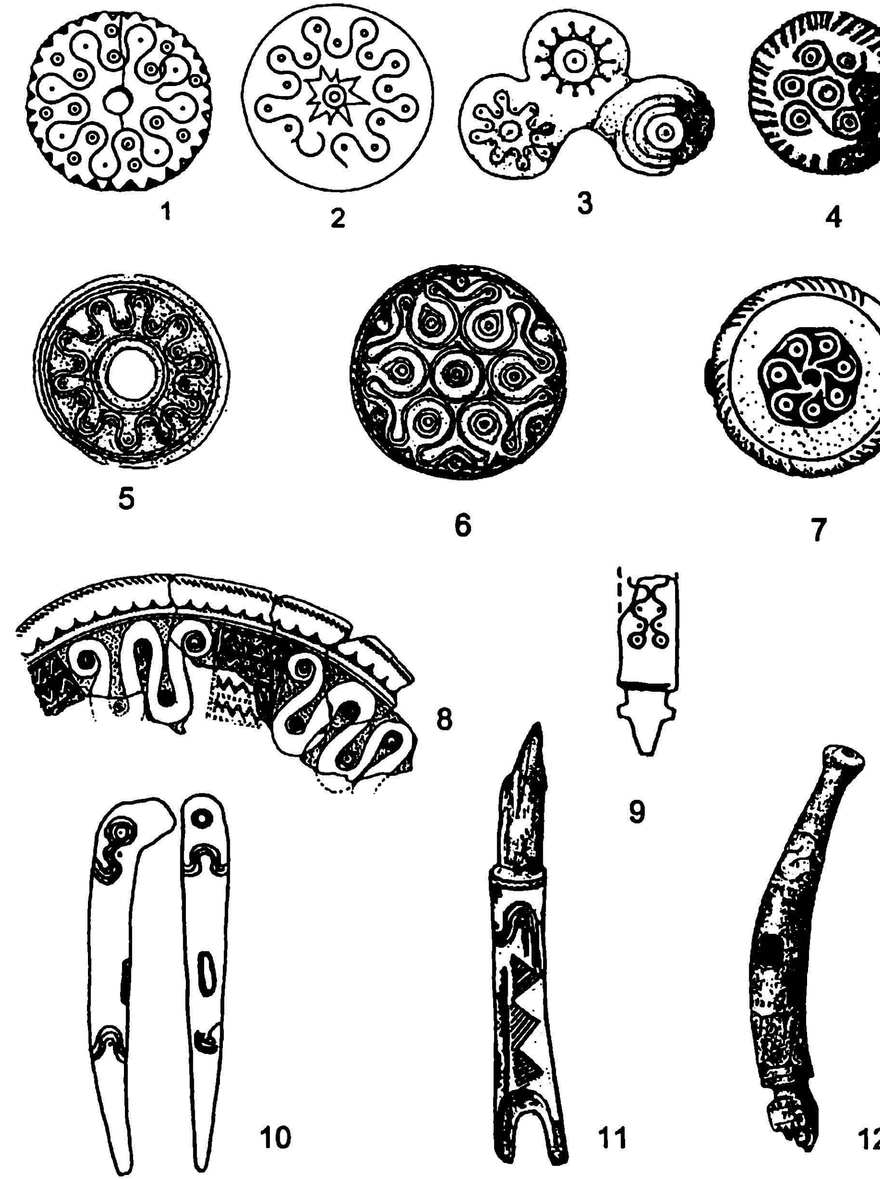


Fig.2. Bone (1-5,7,9-12), gold (6) pices and pottery (8) with "mycenaean"decoration. MBA and LBA: 1. *Pererîta,* Bessarabia, Noua culture. Diggings E. Jarovoj and A. Čirkov, Drawing V. Cavruc; 2. *Crasnaleuca,* România, Moldova, Noua culture. Diggings Lidia Dascălu, Drawing V. Cavruc; 3. *Kirovo,* Ukraine, Krimea, Sabatinovka culture. Apud V. V. Otroščenko, in ArhUSSR, 1985, p. 523, fig. 142/28; 4-6. *Mikenae.* Apud W.David, 1997, Taf.: 1/3, 6/3; 7. *Tîrgu Secuiesc,* România, Southeastern Transylvania, Noua culture. Apud Székely Z., 1977; 8. *Suciu de Sus.* România, Maramureş, Suciu de Sus culture. Apud T. Bader, 1978; 9. *Vološskoe,* Southern Ukraine, Sabatinovka culture. Apud Irina N. Šarafutdinova, 1986, fig. 29/5; 10. *Kirovo,* Ukraine, Krimea, Sabatinovka culture. Apud Irina N. Šarafutdinova, 1986, fig. 29/4. 11. *Floreni,* România, Moldova, Noua culture. Apud A. C. Florescu, 1991, fig. 151/3; 12. *Spišsky Stvrtok,* Slovakia, Otomany culture. Apud W. David, 1997, Taf. 8/3.

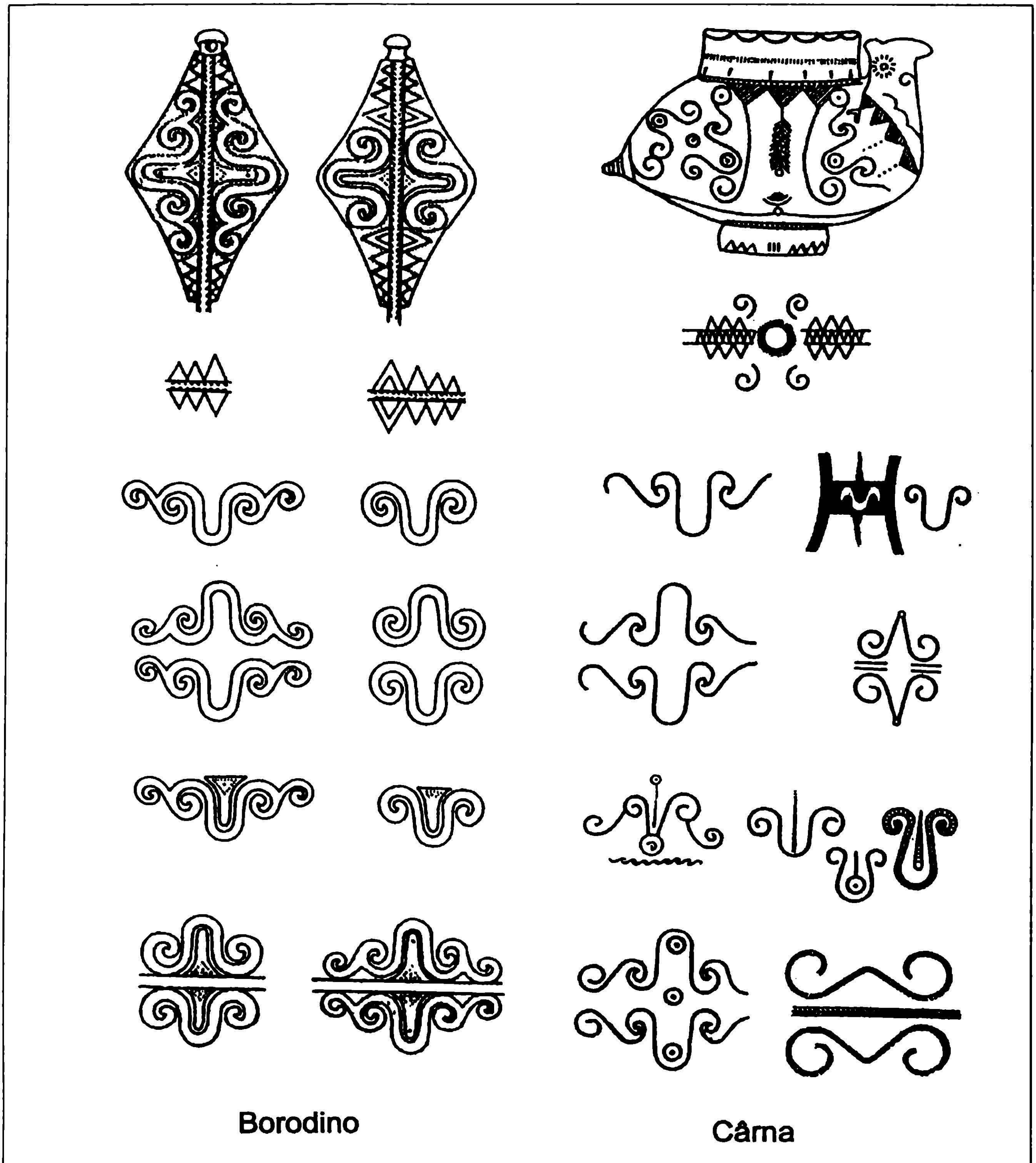


Fig. 3. "Mycenaean" decoration on the needle from Borodino and on the pot from Cârna. Apud V.S. Bočkarev, 1968.

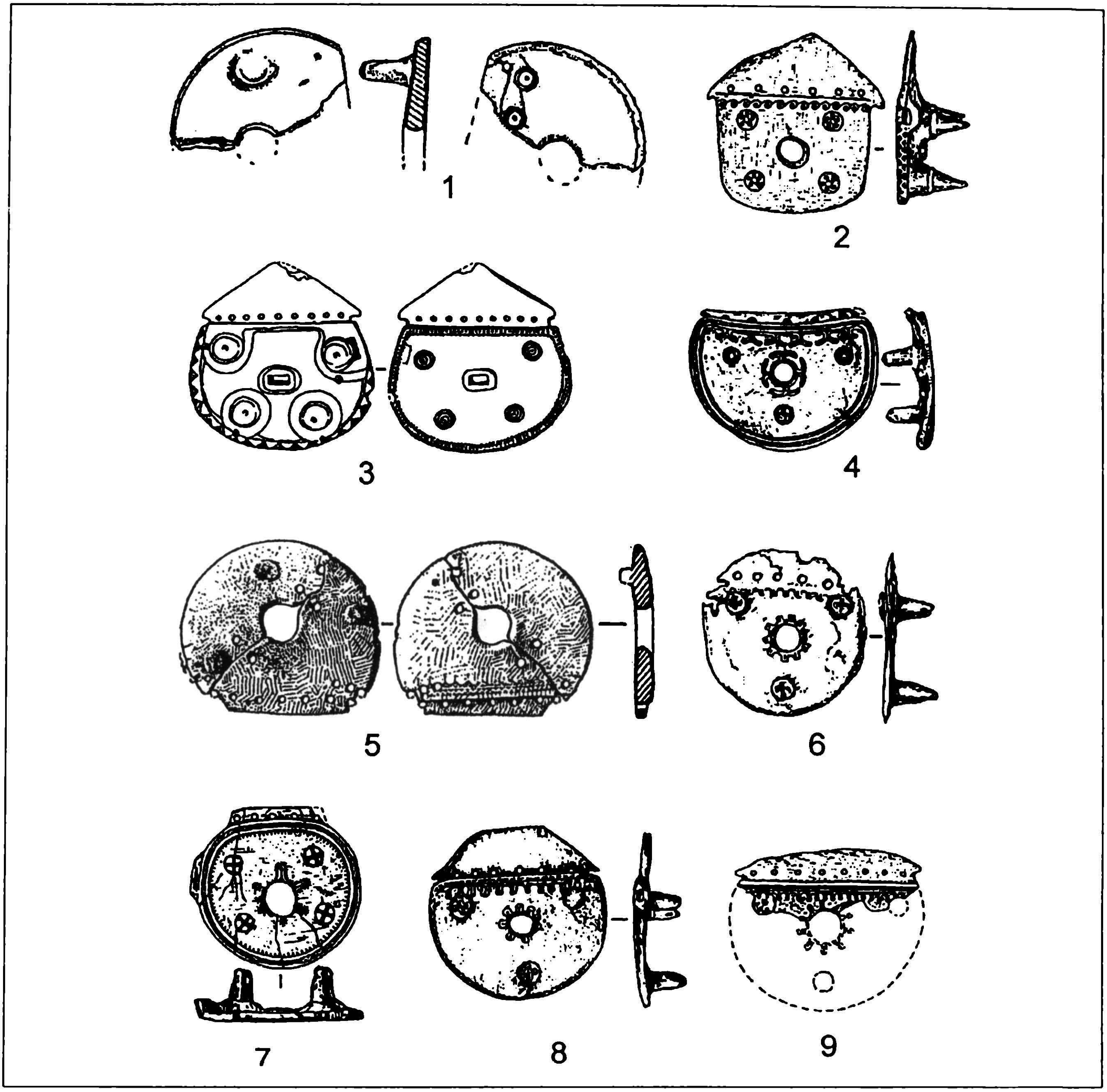


Fig. 4. Decorated bone cheek pieces. 1. *Cârlomănești,* România, Northeastern Wallachia, Monteoru culture. Apud Al. Oancea, V. Drâmboceanu, 1978, p.7, fig.3-4; 2. *Bogojavlenka,* Southwestern Russia, Abaševo culture. Apud V. Besedin, A. Prjahin, 1992; 3. *Filatovka,* Russia, Don valley, Abaševo culture. Apud A.T.Sinjuk., I.A.Kozmirčuk, 1995, p.55, fig. 9/1; 4. *Pičaevo,* Russia, Tambov district. Apud N. B. Moiseev, K. Ju. Efimov, 1995, p. 79, fig. 3/2; 5. *Sărata Monteoru,* România, North-Eastern Wallachia, Monteoru culture. Apud Eugenia Zaharia; 6, 8. *Potapovka,* Russia, Kujbyševskij District, Potapovka group. Apud I.B.Vasil'ev, P.F.Kuznecov, A.P.Semenova, 1994, p. 153, fig. 49/3; 7. *Starojur'evo,* Russia, Don valley, Abaševo culture. Apud V.Besedin, A. Prjahin, 1992; 9. *Kondraševka,* Russia, Don valley, Abaševo culture. Apud V. Besedin, A. Prjahin, 1992.

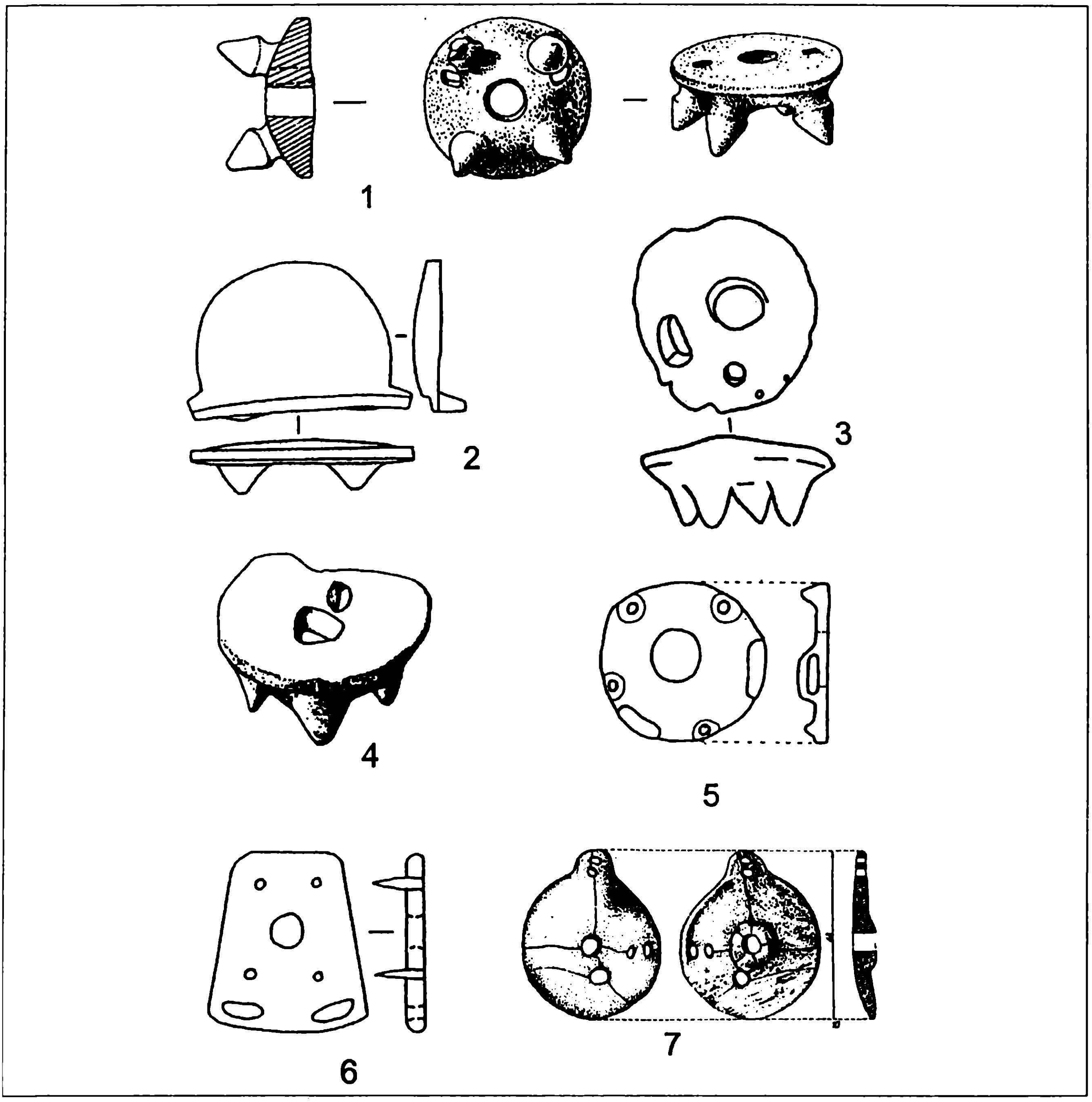


Fig.5. Undecorated bone cheek pieces: 1. *Sintašta*. Russia, South Urals, Sintašta culture. Apud V. F. Gening, G. B. Zdanovič, V. V. Gening, 1992, p. 321, fig. 126/1; 2. *Sighişoara - Dealul Turcului*, România, Southeastern Transylvania, Wietenberg culture. Apud N. Boroffka, 1994, Teil 2, Taf.130/6; 3. *Trahtemirov*. Ukraine, North-Pontic, Mnogovalikovaja pottery culture. Apud S. N. Bratčenko, 1985, p. 456, fig. 123/14; 4. *Balanbaš*. Russia, Baškirija, Abaševo culture; 5, 7 *Brad*. România, Moldova, Monteoru culture. Apud V. Ursachi, 1995, p. 504, pl. 213/2; 214/10; 6. *Oarţa de Jos*. România, Maramureş, Wietenberg culture. Apud N. Boroffka, 1994, Teil 2, Typentafel 31/22.

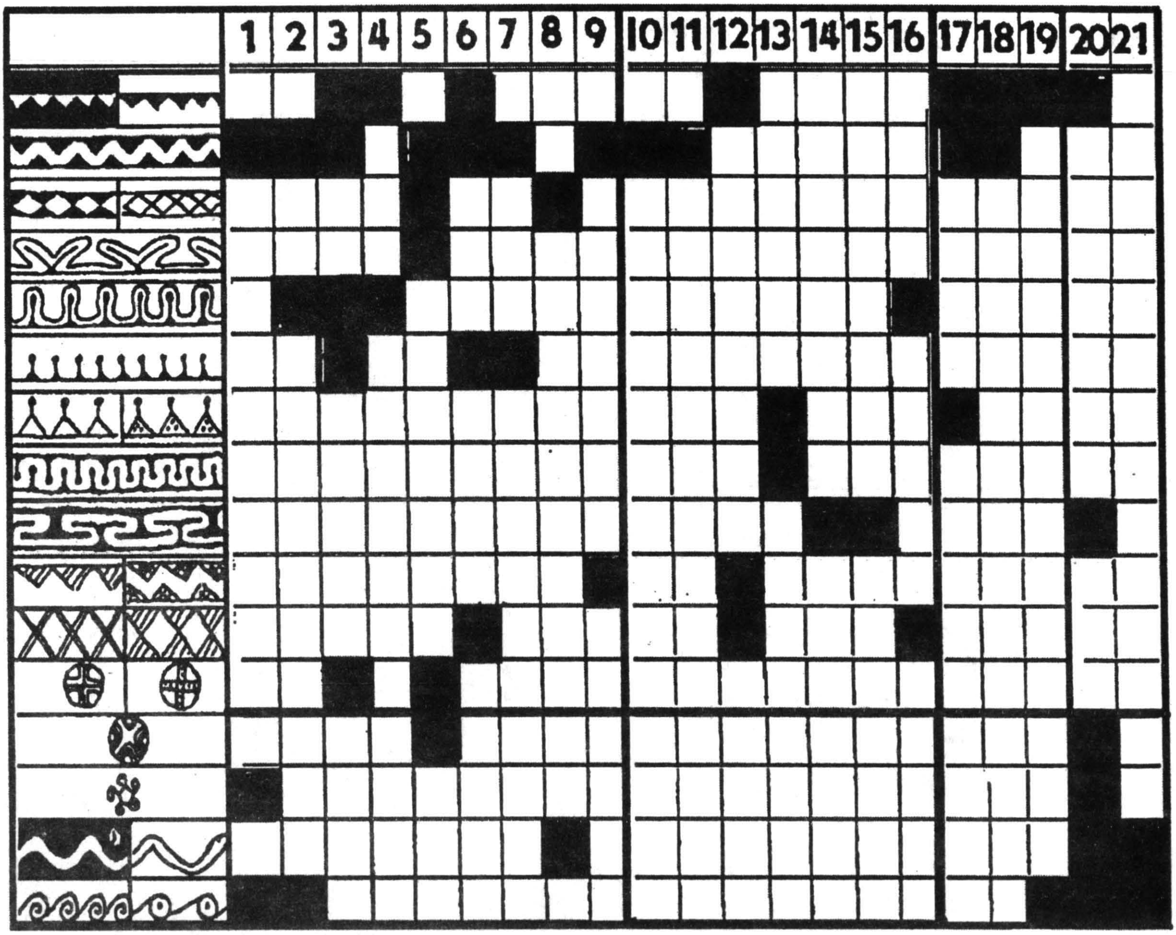


Fig. 6. Ornametal motifs on the bone cheek pieces. Apud Besedin, Prjahin, 1992.

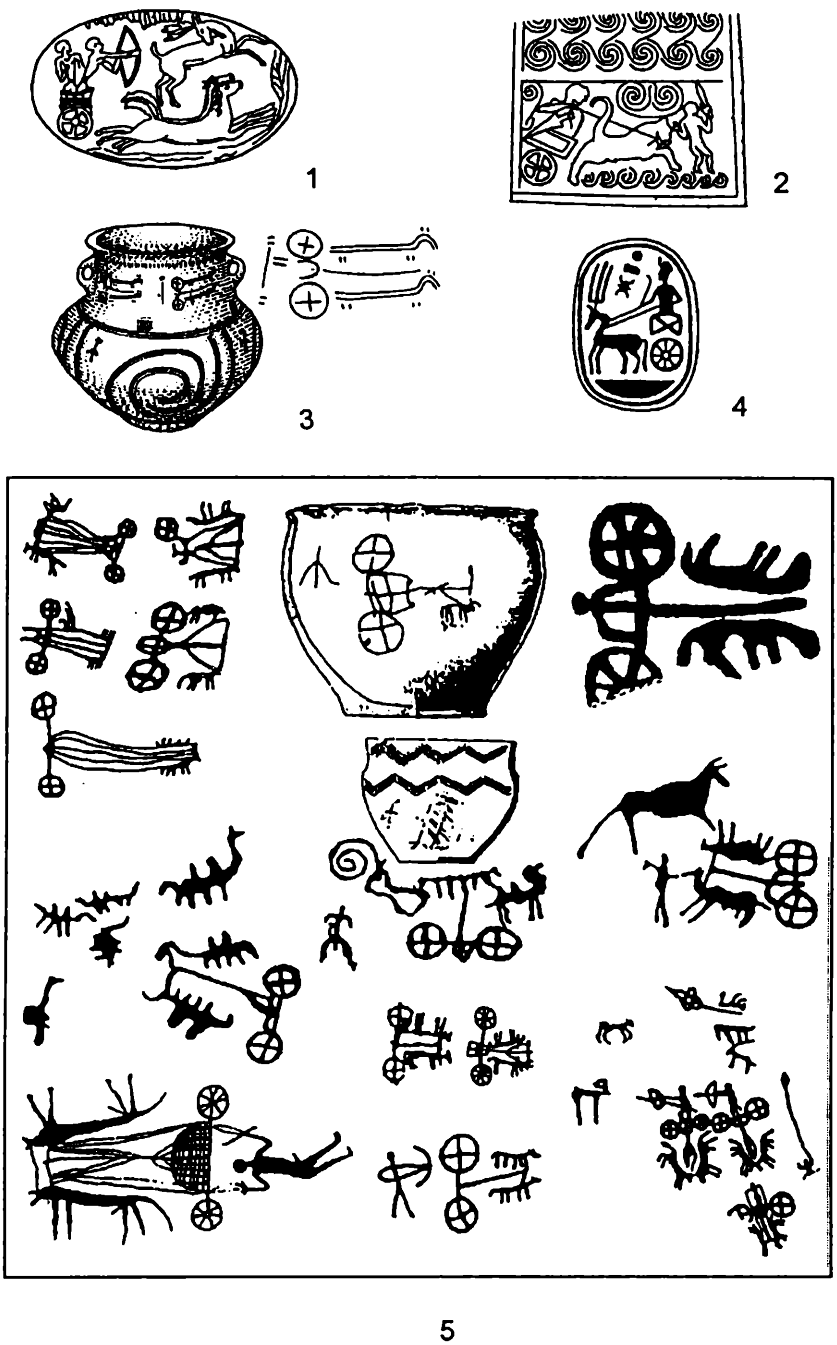


Fig.7. MBA images of chariots: 1, 2. *Mycenae.* Apud Müller-Karpe, 1978; 3. *Vel'ke Raškovce,* Slovakia, Piliny culture. Apud Müller-Karpe, 1978, Abb. 49; 4. *Scarab of the Tutmosis I,* Egypt. Apud Müller-Karpe, 1978, Abb.9; 5. *Sruby* and *Andronovo* cultures. Apud Elena Kuz'mina, 1994.

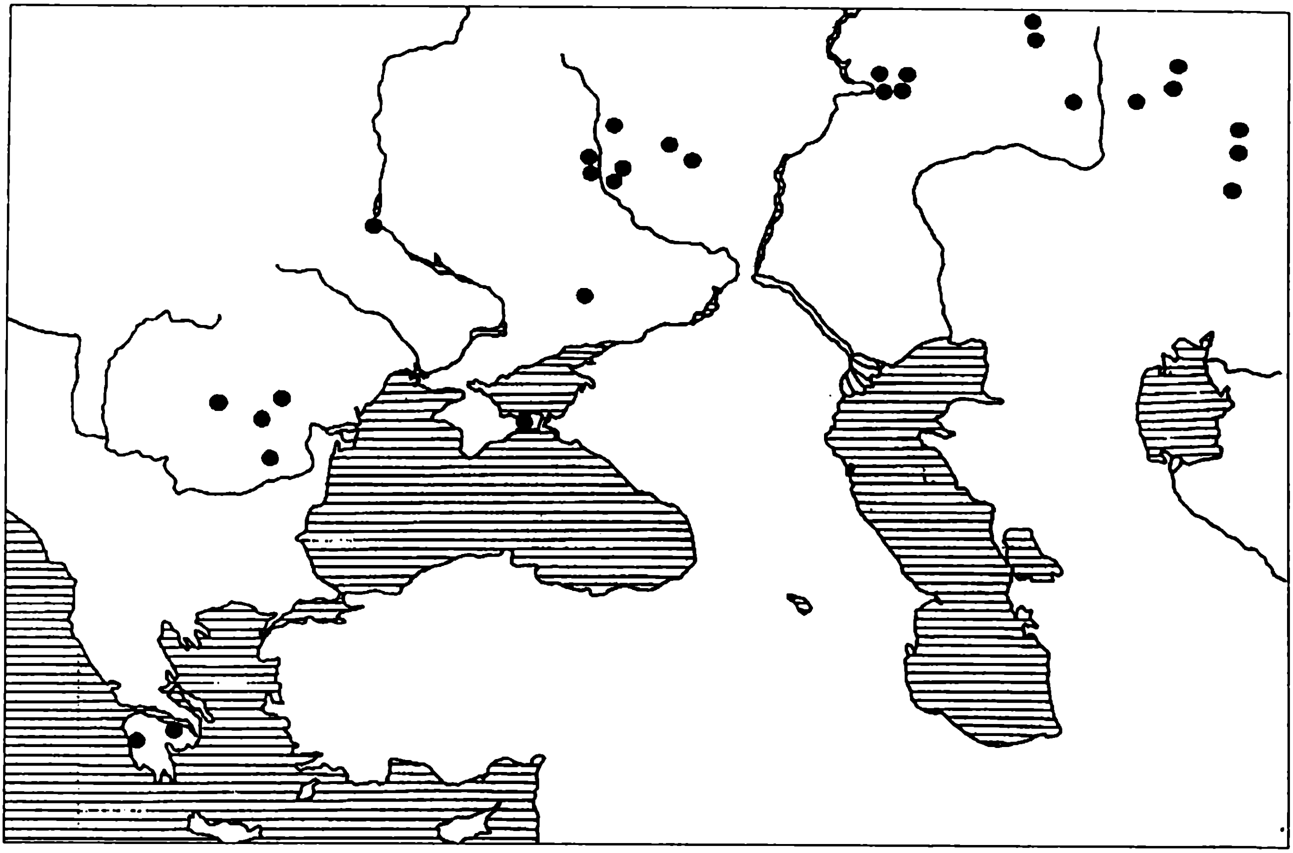


Fig.8. Spread of the notched cheek pieces. Apud: A. Oancea, 1976; Elena E.Kuz'mina,1980,1994, p.392, Map VI; A. D. Prjahin, V. I. Besedin,1992,p. 52, fig. 1.

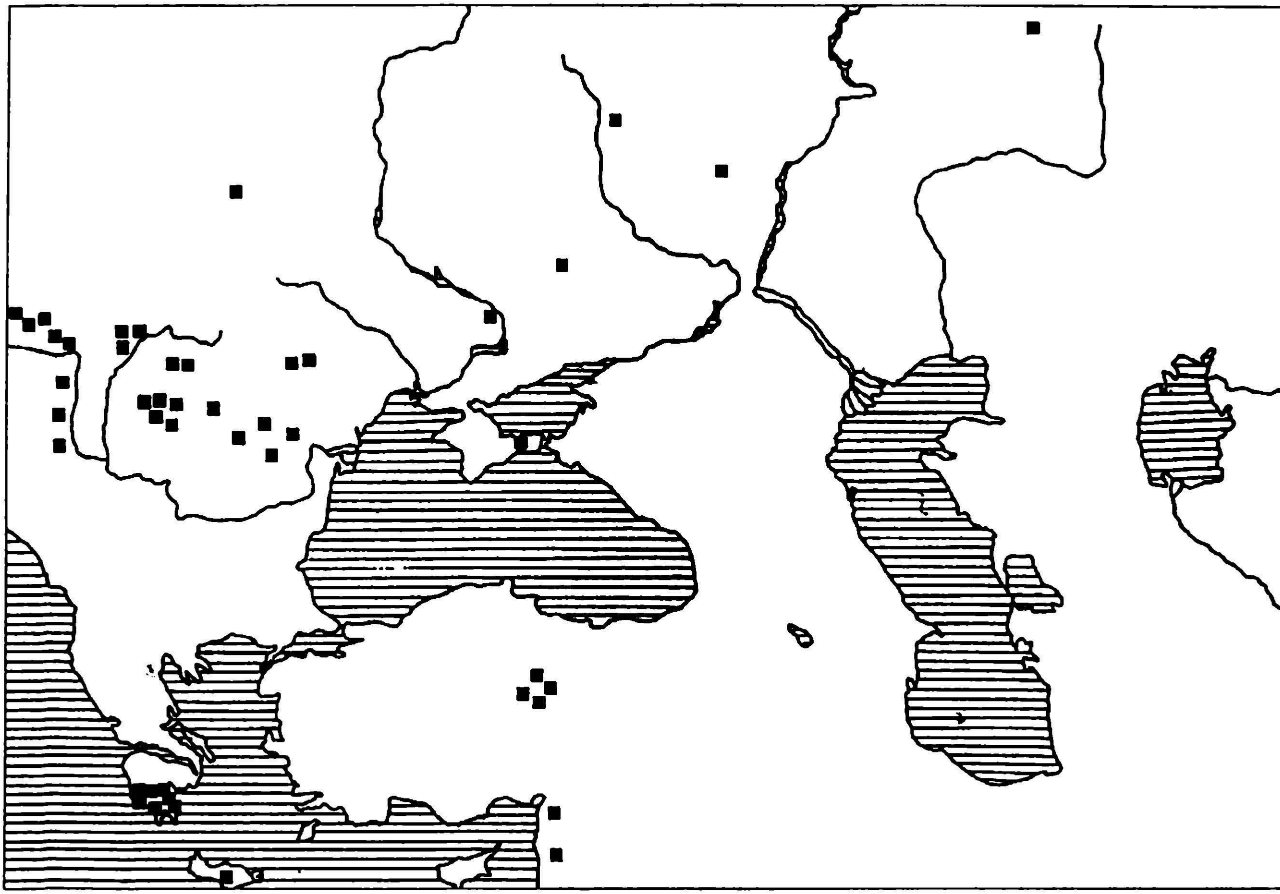


Fig.9. Spread of the bone pieces with "mycenaean" decoration. Apud: I. Bouzek,1985 and W. David,1997.